

Application No. 10/517,216
Amendment dated October 12, 2005
First Preliminary Amendment

Docket No.: 02292/0202193 US0

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Original) A method of producing an animal embryo, the method comprising transferring from a nuclear donor cell which has been selected on the basis that it is histone hypomethylated at least a portion of the nuclear contents including at least the minimum chromosomal material able to support development into a suitable recipient cell.

2. (Original) The method of claim 1 wherein the nuclear donor cell has been selected by experimentally determining that a first cell is histone hypomethylated and selecting a second cell which is similar or identical to the first cell to thereby select a histone hypomethylated cell to be used as said nuclear donor cell.

3. (Original) The method of claim 2 wherein said first cell and second cell are from the same population of cells.

4. (Original) The method of claim 1 wherein the nuclear donor cell has been selected by selecting a cell of a type which has been previously determined as being histone hypomethylated or which has been previously determined as being likely to be histone hypomethylated.

5. (Currently Amended) The method of claim 2 ~~any one of claims 2 to 4~~ wherein the level of histone methylation of said first cell or of said cell type when histone hypomethylated is negligible or absent.

6. (Currently Amended) The method of claim 2 ~~any one of claims 2 to 5~~ wherein the level of histone methylation of said first cell or of said cell type when histone hypomethylated is assessed on the basis of methylation at one or more residues of H3.

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Application No. 10/517,216
Amendment dated October 12, 2005
First Preliminary Amendment

Docket No.: 02292/0202193 US0

7. (Currently Amended) The method of claim 2 ~~any one of claims 2 to 6~~ wherein the level of histone methylation of said first cell or of said cell type when histone hypomethylated is assessed on the basis of methylation at one or more lysine residues.

8. (Original) The method according to claim 7 wherein the level of histone methylation is assessed on the basis of methylation at one, two, three or four of the following lysine residues: residues H3, H3, H3K2' and H3

9. (Original) The method according to claim 8 wherein the level of histone methylation is assessed on the basis of methylation at H3K4 and H3K9.

10. (Currently Amended) The method according to claim 1 ~~any one of the preceding claims~~ wherein the nuclear donor cell is a mammalian cell.

11. (Currently Amended) The method according to claim 1 ~~any one of the preceding claims~~ wherein the recipient cell is a mammalian cell.

12. (Currently Amended) The method according to claim 1 ~~any one of the preceding claims~~ wherein the recipient cell is an enucleated oocyte.

13. (Currently Amended) A method of producing an animal embryo, the method comprising transferring from a nuclear donor cell at least a portion of the nuclear contents including at least the minimum chromosomal material able to support development into a suitable recipient cell wherein the nuclear donor cell is obtained from an embryo obtained by the method of claim 1 ~~any one of claims 1 to 12~~.

14. (Original) The method according to claim 13 wherein the nuclear donor cell has been selected on the basis that it is histone hypomethylated.

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15. (Currently Amended) A method of producing a foetus, the method comprising allowing an embryo obtained by a method according to claim 1 ~~any one of claims 1 to 14~~ to develop into a foetus.

16. (Currently Amended) A method of producing a non-human animal the method comprising allowing an embryo obtained by a method according to claim 1 ~~any one of claims 1 to 14 or a foetus obtained by a method according to claim 15~~ to develop into said non-human animal.

17. (Currently Amended) A method of producing an embryonic stem cell line, the method comprising transferring an embryo obtained by the method of claim 1 ~~any one of claims 1 to 14~~ to a culture system.

18. (Currently Amended) A method of producing an embryonic stem cell line, the method comprising isolating the inner cell mass of an embryo obtained by the method of claim 1 ~~any one of claims 1 to 14~~ and transferring the inner cell mass to a culture system.

19. (Currently Amended) A method according to claim 1 ~~any one of the preceding claims~~ wherein the nuclear donor cell is a non-human cell.

20. (Currently Amended) A method according to claim 1 ~~any one of the preceding claims~~ wherein the recipient cell is a non-human cell.

21. - 33. Cancelled.

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